

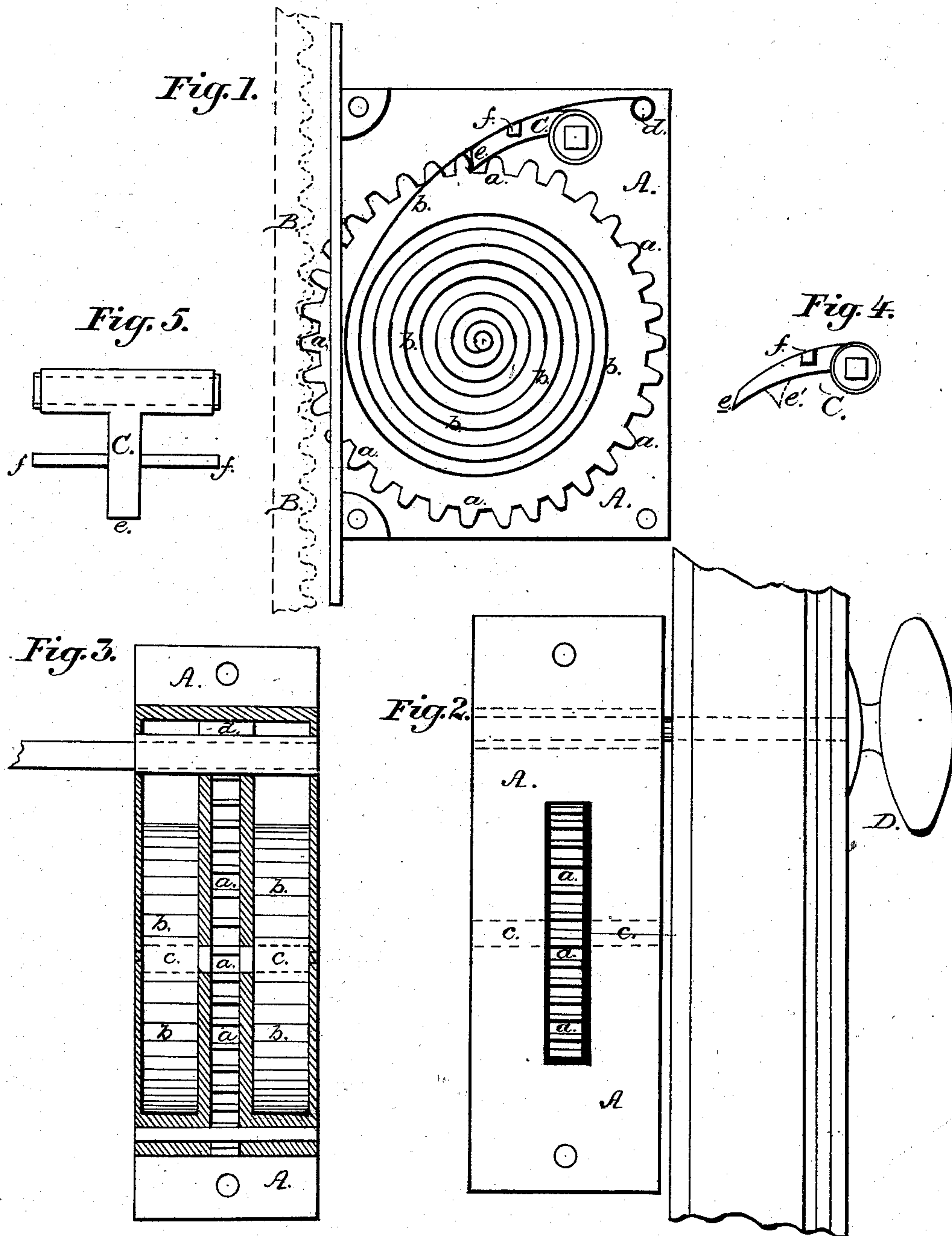
(No Model.)

F. B. COCHRAN.

SASH BALANCE.

No. 255,721.

Patented Mar. 28, 1882.



WITNESSES

J. C. Hesselton.
F. L. McVey.

INVENTOR

Frederic B. Cochran.

UNITED STATES PATENT OFFICE.

FREDERIC B. COCHRAN, OF BOSTON, MASSACHUSETTS.

SASH-BALANCE.

SPECIFICATION forming part of Letters Patent No. 255,721, dated March 28, 1882.

Application filed December 28, 1881. (No model.)

To all whom it may concern:

Be it known that I, FREDERIC BOARDMAN COCHRAN, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented a new and Improved Sash-Balance, of which the following is a specification.

My invention relates to improvements in balancing window-sashes in their frames, and to the automatic raising, retaining, and locking of them at any desired height or point within the scope of their movement; and my improvements consist in the details of construction and general arrangement of parts, all as hereinafter fully shown and described, and pointed out in the claim.

In the accompanying drawings, Figure 1 is a side view of my invention as it appears after the removal of one side of the case in which it is inclosed. Fig. 2 is a front view without the removal of the case. Fig. 3 is a back view of the same. Figs. 4 and 5 are accessory parts of my invention for controlling and retaining the movement of the cog-wheel *a* and holding the sash in place, which will be fully described hereinafter.

Similar letters refer to similar parts.

A represents a case, in which is inclosed a cog-wheel, *a*, suspended on a journal, *c*, between two spiral springs, *b b*, which are arranged in such a manner that they will have a tendency to turn the cog-wheel *a*, one end of the springs being attached to the journal *c* and the other end to the pin *d*. The cases being placed in position in the frame of the window, the wheel *a* engages in a rack, B, in the sides of the sash. The sash on being lowered winds up the springs *b b*, and these tend to turn the wheel *a* and raise the sash in the frame.

I consider as a very necessary and important part of my invention my device for controlling and holding the sash in place, and which I have arranged in the following manner.

Figs. 4 and 5 are respectively side and front views of the pawl C. In Figs. 1 and 2 pawl C is journaled in suitable slots in the case A, and the end *e* of the pawl C is held firmly down and against the cogs in the wheel *a* by one coil of the springs *b b* passing over the arms *f f*. On turning the knob D the point *e* of the pawl C is disengaged from the cogs of the wheel *a*, allowing said wheel the freedom of action hereinbefore described.

The sash cannot be raised when at any point except upon manipulation of the knob D.

In order to lock the upper sash to prevent it from being lowered from the outside, the pawls C in the balances for said sash are provided with a double point, as shown in Fig. 4 at *e'*.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

In a sash-balance, the combination, with the window-sash provided with the rack B, of the cog-wheel *a*, adapted to engage said rack, coiled springs *b*, connected at one end to the journal of said cog-wheel, and pawl C, having operating-knob D and projecting arms *f*, over which said springs pass and bear thereon, substantially in the manner as and for the purpose herein shown and described.

FREDERIC B. COCHRAN. [L. S.]

Witnesses:

J. E. HESSELTINE,
F. L. McVEY.